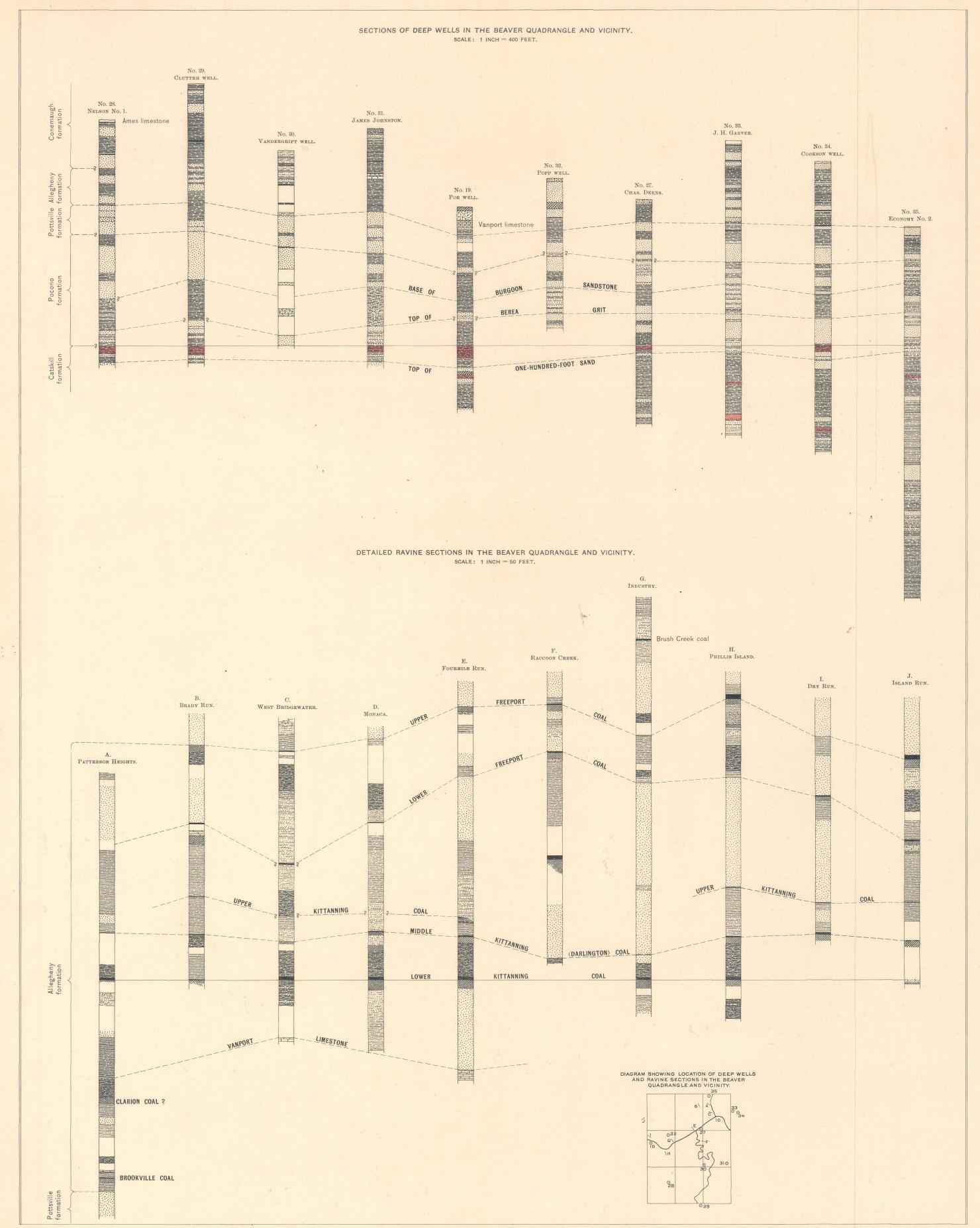
COLUMNAR SECTION

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Series.	Formation Name.	Symbol.	Columnar Section.	THICKNESS IN FRET.	NAMES OF MEMBERS.	CHARACTER AND DISTRIBUTION OF MEMBERS.	GENERAL CHARACTER OF FORMATIONS.
	Monongahela formation.	Cm		35+	Dittelyana agal	About 6 feet thick, with medial parting. Of little importance because it caps only a few hills in the southeast corner of the quadrangle.	Sandstone and shale overlying a coal seam of excellent quality where thickly covered.
					Pittsburg coal.	omy a few fifths in the southeast corner of the quadrangle.	
					Pittsburg limestones.	Thin beds separated by shale. Unimportant in quadrangle.	
						Coarse and thick holded but in places becomes flaggy conditions and chala	
					Morgantown sandstone.	Coarse and thick bedded, but in places becomes flaggy sandstone and shale. Averages 65 feet thick.	
			Tropics		Elk Lick coal.	A coal of good quality, but very irregular in occurrence. Varies from 0 to 3 feet thick.	
		(Gam)			Ames ("Crinoidal") lime- stone. Platt (?) coal.	Greenish-gray, impure limestone, 2 to 6 feet thick, with many crinoid plates. Unimportant.	
	Conemaugh formation.	Ccm		520±			Shale and coarse sandstone with occasional thin be of limestone and coal. The upper portion is provailingly sandy, while the lower part contains most shale. Some prominent beds of green and red sha give a distinct color to the soil on their outcrop.
					Bakerstown coal.	Lenticular, in places cannel coal. Varies from 0 to 7 feet thick.	
Z					Brush Creek limestone.	A dense bluish-black limestone of no importance.	
NSYLV					Brush Creek coal.	Thin and unimportant, probably made up of lenses not always at the same horizon.	•
G M							
						Shaly to coarse flaggy sandstone, locally heavy and conglomeratic and contain	
			ိုင္ခဲ့ႏိုင္ငံ လူလုပ္ေတြ		Mahoning sandstone. Upper Freeport coal, clay, and limestone.	Shaly to coarse flaggy sandstone, locally heavy and conglomeratic and containing near top lenses of limestone 1 to 8 feet thick. Coal of good quality, but irregular, from 0 to 53 inches thick, and often absent.	
					and limestone. Butler sandstone.	Coal of good quality, but irregular, from 0 to 53 inches thick, and often absent. Pale-drab clay; contains some iron. Usually 4 to 5 feet thick, but locally much thicker. Limestone buff to blue, of variable purity, often brecciated and generally nonfossiliferous. Ordinarily 3 to 5 feet thick. Can be burned for fertilizer. A clay of variable thickness rarely occupies the Bolivar horizon beneath the limestone.	
The state of the s					Lower Freeport coal, clay, and limestone.	Coal generally unimportant and frequently absent, but well developed in northern part of quadrangle. Usually 1 to 2 feet thick. Refractory clay, valuable in places for crude purposes, commonly 4 to 5 feet thick, but locally 10± feet. Limestone usually impure, hard, nonfossiliferous, of buff color; can be burned for fertilizer.	
					Freeport sandstone.		
					Upper Kittanning coal.	Generally thin and unimportant.	
	Allegheny formation.	Ca		280-345	Middle Kittanning (Dar- lington) coal and clay.	Persistent coal, fair to excellent quality, usually 1 to 2 feet thick, underlain by $4\pm$ feet of impure ferruginous clay.	Shale, sandstone, fire clay, coal, and limestone. San stone predominates, but in places becomes the bedded and shaly. Coal beds are promising in smareas, but at present are not much exploited. Lin stones, usually thin, locally develop important this nesses. Fire clay is generally present and of grevalue, particularly beneath the several coal seams.
			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		Lower Kittanning coal and clay.	Coal uniformly 1½ to 2 feet thick and persistent, but varies from an excellent to a slaty or sulphurous grade. Refractory clay, persistent, 6 to 9 feet thick, and valuable; upper part usually pure and plastic, while lower portion is sandy and ferruginous.	nesses. Fire clay is generally present and of grevalue, particularly beneath the several coal seams
					Vanport ("Ferriferous") limestone.	Rather pure limestone, sometimes overlain by a few inches of iron ore. Usually under 8 feet thick. Certain portions produce good lime.	
	•				Clarion coal and clay.	Coal is thin and unimportant. Clay is refractory and of good quality.	
			Sumostiqueses Constitutions		Brookville coal.	Little exposed, $1\frac{1}{2}$ to 3 feet thick.	
	Pottsville sandstone.	Сру		200±	Homewood sandstone.	Coarse, white, hard, siliceous sandstone about 20 feet thick. Generally massive	Coarse siliceous sandstone and fine conglomerat Sometimes massive and cross-bedded, with inte mediate shale carrying iron ore and coal.



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